

## OPTIMIZED PROCESSORS AND INSTRUCTION ALIGNMENT

### **Abstract of the Disclosure**

5           Methods and apparatus are provided for optimizing a processor core.  
Common processor subcircuitry is used to perform calculations for various types of  
instructions, including branch and non-branch instructions. Increasing the  
commonality of calculations across different instruction types allows branch  
instructions to jump to byte aligned memory address even if supported instructions  
10   are multi-byte or word aligned.